

Application No. : 10/679,963
Amdt. Dated : September 1, 2004
Reply To O.A. Of : June 2, 2004

Amendments To The Claims

The following listing of claims replaces all prior versions and listings of claims in the application. The listing of claims presents each claim with its respective status shown in parentheses.

Claims 1-10. (Canceled).

Claim 11. (New) An optical probe capable of outputting a signal indicative of light transmitted through body tissue, the optical probe comprising:

one or more emitters capable of emitting light;

detector circuitry capable of detecting light transmitted through body tissue of a patient and outputting a signal usable to determine at least one physiological parameter of the patient;

a probe housing including a first positioning member and housing the one or more emitters and the detector circuitry;

one or more protruding emitter lenses protruding from the probe housing;

one or more protruding detector lenses protruding from the probe housing;

a protruding optical barrier protruding from the probe housing between the one or more protruding emitter lenses and the one or more protruding detector lenses, wherein the protruding optical barrier is positioned to reduce an amount of emitted light capable of reaching the detector circuitry without being transmitted through body tissue; and

an attachment mechanism including at least one second positioning member mechanically mateable with the first positioning member to position the probe housing with respect to the attachment mechanism, wherein attachment of the attachment mechanism to the body tissue positions the probe housing against the body tissue with sufficient pressure to noninvasively recess the protruding optical barrier into the body tissue and to noninvasively recess the one or more protruding emitter lenses and the one or more protruding detector lenses into the body tissue substantially along a plane thereof.

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Claim 12. (New) The optical probe of Claim 11, wherein the attachment mechanism further comprises a pressure applicator capable of applying sufficient pressure against the probe housing to assist the attachment mechanism in accomplishing the noninvasive recessing.

Claim 13. (New) The optical probe of Claim 12, wherein the pressure applicator comprises a substantially convex biasing member.

Claim 14. (New) The optical probe of Claim 11, wherein the attachment mechanism comprises a headband.

Claim 15. (New) The optical probe of Claim 14, wherein the headband further comprises:

a plurality of the second positioning members, each member mechanically mateable with the first positioning member to provide for a plurality of potential positions of the probe housing with respect to the attachment mechanism; and

indicia on the headband instructing a caregiver which of the potential positions will apply a predetermined amount of pressure against the probe housing.

Claim 16. (New) The optical probe of Claim 15, wherein the indicia include ruler-like indicia.

Claim 17. (New) The optical probe of Claim 11, wherein the attachment mechanism comprises an adhesive tape.

Claim 18. (New) The optical probe of Claim 17, wherein the second positioning member is substantially centered with respect to the adhesive tape.

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Claim 19. (New) A pulse oximetry system capable of increasing the accuracy of the determination of one or more physiological parameters of a patient, the pulse oximetry system comprising:

an oximeter comprising a memory capable of storing a plurality of calibration curves, wherein the calibration curves comprise corrective information usable by the oximeter to correct determined values of one or more physiological parameters based on a signal received from the an optical probe that includes at least one emitter capable of emitting light at about a first predetermined wavelength;

an optical probe including an emitter capable of emitting light at about a second predetermined wavelength different from the first predetermined wavelength, whereby selection of the optical probe operating at the second predetermined wavelength causes the oximeter expecting signals relating to the first predetermined wavelength to determine more accurate values for the one or more physiological signals.

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Claim 20. (New) The pulse oximetry system of Claim 19, wherein the optical probe including the emitter capable of emitting light at about the second wavelength further comprises:

- a probe housing including a first positioning member;
- one or more protruding emitter lenses protruding from the probe housing;
- one or more protruding detector lenses protruding from the probe housing;
- a protruding optical barrier protruding from the probe housing between the one or more protruding emitter lenses and the one or more protruding detector lenses; and

- an attachment mechanism including at least one second positioning member mechanically mateable with the first positioning member to position the probe housing with respect to the attachment mechanism, wherein attachment of the attachment mechanism to the body tissue positions the probe housing against the body tissue with sufficient pressure to noninvasively recess the protruding optical barrier into the body tissue and to noninvasively recess the one or more protruding emitter lenses and the one or more protruding detector lenses into the body tissue substantially along a plane thereof.

Claim 21. (New) The pulse oximetry system of Claim 19, wherein the selection of the optical probe operating at the second predetermined wavelength is based on a type of patient being monitored.

Claim 22. (New) The pulse oximetry system of Claim 19, wherein the selection of the optical probe operating at the second predetermined wavelength is based on the oximeter.

Claim 23. (New) The pulse oximetry system of Claim 19, wherein the selection of the optical probe operating at the second predetermined wavelength is based on a type of measurement site.

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Amendments To The Drawings

The attached two (2) sheets of drawings include changes to Figs. 1-3. The sheets replace the original sheets, and Figs. 1-3 have been amended to include the appropriate reference numerals from the specification.